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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,479	08/01/2001	Erdal Paksoy	TI-31551	5575
23494	7590	08/25/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			CHAWAN, VIJAY B	
			ART UNIT	PAPER NUMBER
			2654	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/920,479

Applicant(s)

PAKSOY ET AL.

Examiner

Vijay B. Chawan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The final action dated 11/05/04 is vacated. The following action is in response to the applicants appeal brief filed 4/6/05.

#### ***Allowable Subject Matter***

2. Claims 3-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tucker et al., (6,675,144) in view of Smythe et al., (5,978,762) and further in view of Akamine et al., (re36,721).

As per claim 1, Tucker et al., teach a method of wideband speech decoding comprising:

(a) decoding a first portion of an input signal as a lowband speech signal (Col.3, lines 16-17);

(b) decoding a second portion of an input signal by a portion of the results of said decoding as a lowband speech signal of preceding step (a) (Col.3, lines 26-33, Col.6, lines 36-46, Col.7, lines 17-60); and,

(c) combining the results of the forgoing steps (a) and (b) to form a decoded wideband speech signal (Col.1, lines 61-64, Col.6, lines 36-46, Col.7, lines 28-60).

Tucker et al., however do not specifically teach noise modulated signal. Smythe et al., do teach decoding a speech signal using noise modulation using an ADPCM filter (Col.9, lines 9-30). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to using the decoding method of Smythe et al., in the method of Tucker et al., because, one with ordinary skill in the art would readily realize that splitting the signal into a smaller number of sub-bands reduces the audible effects of noise modulation and allows the exploitation of long-term spectral variances in audio signals. Smythe et al., Col.2, lines 27-35).

Tucker et al., in view of Smythe et al., however, do not specifically teach adaptive smoothing. Akamine et al., do teach a smoothing circuit to smooth a power spectrum of a speech signal (Col. 27, lines 16-22, Fig.30). Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention was made to modify the method of wideband speech decoding of Tucker et al., in view of Smythe et al., with the adaptive smoothing technique of Akamine et al., because this would enable the signal

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to be streamlined to be more easily combinable with another signal to form a wideband signal.

Claim 2 is directed toward an apparatus to implement the method of claim 1, and is similar in scope and content and is rejected under similar rationale.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-2 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Smyth et al., (5,974,380) teach a multichannel audio decoder.

Gudmundson (5,341,397) teaches CDMA frequency allocation.

Schilling (5,224,120) teaches dynamic capacity allocation CDMA spread spectrum communications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vijay B. Chawan whose telephone number is (571) 272-7601. The examiner can normally be reached on Monday Through Friday 6:30-3:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vijay B. Chawan  
Primary Examiner  
Art Unit 2654

vbc  
8/20/05

**VIJAY CHAWAN**  
**PRIMARY EXAMINER**